

Intelligent Flight Support System (IFSS): A Real-time Intelligent Decision Support Prototype, Phase I

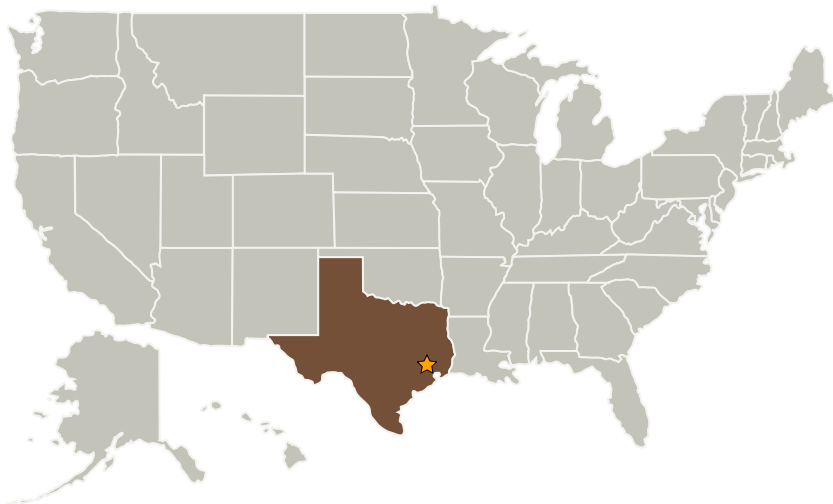
Completed Technology Project (2004 - 2004)



Project Introduction

The integration of the analysis tools with the advanced visualization capabilities in The Intelligent Flight Support System (IFSS) can provide a unique method for investigating dynamic spatial problems. The IFSS will use a simple joystick driven navigation paradigm to navigate throughout the environment by simply flying through the space. In this manner, the FC has the ability to move around and into the ISS while maintaining a fixed gaze towards the ISS. This allows the FC to view the ISS and Space Shuttle from different perspectives and perform several different analyses that provide input to the IFSS visualization software. The user interface will be comprised of two distinct data and intelligent components. The data component provides FCs with all currently used displays at MCC while the intelligent component is used to provide the FCs with what-if, goal-seeking and graphing capabilities. In addition, an expert system will be embedded in the intelligent component allowing FCs to perform more sophisticated analysis, such as dual angle operations, feathering for docking, shadow analysis, auto tracking.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
HPN Software Consultant, Inc.	Supporting Organization	Industry	Houston, Texas



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations

Texas

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Lac V Nguyen

Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
 - └ TX11.4 Information Processing
 - └ TX11.4.2 Intelligent Data Understanding